ABSTRACT OF THE DISCLOSURE

The present invention enables recognition of a similar image as a similar image data when an image processing of the similar image is performed, and precisely recognizes a relatively complicated image. The present invention includes: a vector generating section 1 for extracting an image data of a region that is defined corresponding to a predetermined position inside an inputted image and expressing a vector of this image data; a storage section 2 having a plurality of pattern groups that contain at least one reference pattern belonging to a predetermined class; a similarity calculating section 3 for checking the vectorized image data with each of the reference patterns, and evaluating a similarity between each of the reference patterns and the image data; and a WTA circuit 4 for performing a predetermined calculation on each evaluation value of the similarity to thereby determine at least one evaluation value. In the present invention, the class of the reference pattern that corresponds to the determined evaluation value is identified, and the evaluation value and the identified class of the reference pattern are made to correspond to the predetermined position.